

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listing of claims in the above-identified application.

**Listing of Claims:**

1 (Currently Amended). An apparatus comprising:

at least one wireless transceiver to transmit and receive signals in accordance with a first and a second protocol to and from first and second network devices of a first and a second wireless network communicatively coupled to the apparatus; and

at least one controller manager coupled to said at least one wireless transceiver to operate said at least one wireless transceiver to perform said transmits and receives in accordance with said first and second protocols in a coordinated manner, taking into consideration quality of service criteria to be achieved for the respective protocols wherein the quality of service criteria is based at least in part upon a first quality metric reflective of a first frequency of error maintained for the first protocol.

2 (Original). The apparatus of claim 1, wherein said at least one controller manager is equipped with logic to determine message types of first messages to be transmitted to a selected one or selected ones of said first network devices in accordance with said first protocol, and to give priority to said first messages over second messages to be transmitted to a selected one or selected ones of said second network devices in accordance with said second protocol, if message types of said first messages are determined of a multi-media type.

3 (Currently Amended). ~~The apparatus of claim 1,~~ An apparatus comprising:

at least one wireless transceiver to transmit and receive signals in accordance with a first and a second protocol to and from first and second network devices of a first and a second wireless network communicatively coupled to the apparatus; and

at least one controller manager coupled to said at least one wireless transceiver to operate said at least one wireless transceiver to perform said transmits and receives in accordance with said first and second protocols in a coordinated manner, taking into consideration quality of

service criteria to be achieved for the respective protocols, wherein said at least one controller manager is equipped with logic to maintain a quality metric reflective of frequency of error for each voice stream, and to make its priority determination for messages competing to be transmitted to said first and second network devices in accordance with said first and second protocols in view of said quality metric maintained for each voice stream.

4 (Original). The apparatus of claim 3, wherein said at least one controller manager is equipped with logic to increment a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream, and not dropping a message of the voice stream until at least  $m$  messages have been successfully transmitted consecutively for the voice stream, where  $m$  is greater than  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

5 (Original). The apparatus of claim 4, wherein said at least one controller manager is further equipped with logic to reset a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least  $m$  messages have been successfully transmitted consecutively for the voice stream.

6 (Original). The apparatus of claim 3, wherein said at least one controller manager is equipped with logic to increment a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream in accordance with said first protocol, and not dropping a message of the voice stream in favor of a message of a first message type to be transmitted in accordance with said second protocol until at least  $m_1$  messages have been successfully transmitted consecutively for the voice stream, where  $m_1$  is greater than a first multiple of  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

7 (Original). The apparatus of claim 6, wherein said message of the first message type to be transmitted in accordance with said second protocol is an acknowledgement message.

8 (Original). The apparatus of claim 6, wherein said logic further not dropping a message of the voice stream in favor of a message of a second message type to be transmitted in accordance with said second protocol until at least m2 messages have been successfully transmitted consecutively for the voice stream, where m2 is greater than a second multiple of 1/e, which is greater than m1.

9 (Original). The apparatus of claim 8, wherein said message of the second message type to be transmitted in accordance with said second protocol is a data message.

10 (Original). The apparatus of claim 8, wherein said at least one controller manager is further equipped with logic to reset a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least m1/m2 messages have been successfully transmitted consecutively for the voice stream.

11 (Original). The apparatus of claim 1, wherein the first and the second protocol are two protocols selected from a group consisting of Bluetooth, 802.11 frequency hopping, 802.11 direct sequence, 802.11 a, 802.11 b, and Home RF.

12 (Original). The apparatus of claim 1, wherein the apparatus is a computer having a form factor selected from a group consisting of a desktop type, a notebook type and a palm sized type.

13 (Currently Amended). In an apparatus having at least one wireless transceiver and at least one controller manager, a method of operation comprising:

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a first protocol to and from first network devices of a first wireless network; and

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a second protocol to and from second network devices of a second wireless network;

wherein both of said controlling are performed in a coordinated manner, including taking into consideration quality of service criteria to be achieved for the respective protocols wherein

the quality of service criteria is based at least in part upon a first quality metric reflective of a first frequency of error maintained for the first protocol.

14 (Original). The method of claim 13, said taking into consideration quality of service criteria to be achieved for the respective protocols comprises determining message types of first messages to be transmitted to a selected one or selected ones of said first network devices in accordance with said first protocol, and giving priority to said first messages over second messages to be transmitted to a selected one or selected ones of said second network devices in accordance with said second protocol, if message types of said first messages are determined of a multi-media type.

15 (Currently Amended). The method of claim 13, In an apparatus having at least one wireless transceiver and at least one controller manager, a method of operation comprising:

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a first protocol to and from first network devices of a first wireless network; and

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a second protocol to and from second network devices of a second wireless network;

wherein both of said controlling are performed in a coordinated manner, including taking into consideration quality of service criteria to be achieved for the respective protocols and wherein said taking into consideration quality of service criteria to be achieved for the respective protocols comprises maintaining a quality metric reflective of frequency of error for each voice stream, and making priority determination for messages competing to be transmitted to said first and second network devices in accordance with said first and second protocols in view of said quality metric maintained for each voice stream.

16 (Original). The method of claim 15, wherein said taking into consideration quality of service criteria to be achieved for the respective protocols comprises incrementing a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream, and not dropping a message of the voice stream until at least m messages have been successfully

transmitted consecutively for the voice stream, where  $m$  is greater than  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

17 (Original). The method of claim 16, wherein said taking into consideration quality of service criteria to be achieved for the respective protocols comprises resetting a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least  $m$  messages have been successfully transmitted consecutively for the voice stream.

18 (Original). The method of claim 15, wherein said taking into consideration quality of service criteria to be achieved for the respective protocols comprises incrementing a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream in accordance with said first protocol, and not dropping a message of the voice stream in favor of a message of a first message type to be transmitted in accordance with said second protocol until at least  $m_1$  messages have been successfully transmitted consecutively for the voice stream, where  $m_1$  is greater than a first multiple of  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

19 (Original). The method of claim 18, wherein said message of the first message type to be transmitted in accordance with said second protocol is an acknowledgement message.

20 (Original). The method of claim 18, wherein said taking into consideration quality of service criteria to be achieved for the respective protocols further comprises not dropping a message of the voice stream in favor of a message of a second message type to be transmitted in accordance with said second protocol until at least  $m_2$  messages have been successfully transmitted consecutively for the voice stream, where  $m_2$  is greater than a second multiple of  $1/e$ , which is greater than  $m_1$ .

21 (Original). The method of claim 20, wherein said message of the second message type to be transmitted in accordance with said second protocol is a data message.

22 (Original). The method of claim 20, wherein said taking into consideration quality of service criteria to be achieved for the respective protocols further comprises resetting a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least m1/m2 messages have been successfully transmitted consecutively for the voice stream.

23 (Currently Amended). A collection of networked apparatuses comprising:

a first plurality of apparatuses wirelessly networked together, with each apparatus being equipped to communicate wirelessly in accordance with a first protocol;

a second plurality of apparatuses wirelessly networked together, with each apparatus being equipped to communicate wirelessly in accordance with a second protocol; and

a multi-protocol apparatus equipped to communicate wirelessly with said first and second plurality of apparatuses in accordance with said first and second protocols respectively, in a coordinated manner, including having been equipped to take into consideration quality of service criteria to be achieved for the respective protocols wherein the quality of service criteria is based at least in part upon a first quality metric reflective of a first frequency of error maintained for the first protocol.

24 (Original). The apparatuses of claim 23, wherein said multi-protocol apparatus is equipped with logic to determine message types of first messages to be transmitted to a selected one or selected ones of said first network devices in accordance with said first protocol, and to give priority to said first messages over second messages to be transmitted to a selected one or selected ones of said second network devices in accordance with said second protocol, if message types of said first messages are determined of a multi-media type.

25 (Currently Amended). ~~The apparatuses of claim 23~~ A collection of networked apparatuses comprising:

a first plurality of apparatuses wirelessly networked together, with each apparatus being equipped to communicate wirelessly in accordance with a first protocol;

a second plurality of apparatuses wirelessly networked together, with each apparatus being equipped to communicate wirelessly in accordance with a second protocol; and

a multi-protocol apparatus equipped to communicate wirelessly with said first and second plurality of apparatuses in accordance with said first and second protocols respectively, in a coordinated manner, including having been equipped to take into consideration quality of service criteria to be achieved for the respective protocols, wherein said multi-protocol apparatus is equipped with logic to maintain a quality metric reflective of frequency of error for each voice stream, and to make its priority determination for messages competing to be transmitted to said first and second network devices in accordance with said first and second protocols in view of said quality metric maintained for each voice stream.

26 (Original). The apparatuses of claim 25, wherein said multi-protocol apparatus is equipped with logic to increment a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream, and not dropping a message of the voice stream until at least  $m$  messages have been successfully transmitted consecutively for the voice stream, where  $m$  is greater than  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

27 (Original). The apparatuses of claim 26, wherein said multi-protocol apparatus is further equipped with logic to reset a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least  $m$  messages have been successfully transmitted consecutively for the voice stream.

28 (Original). The apparatuses of claim 25, wherein said multi-protocol apparatus is equipped with logic to increment a message transmitted counter corresponding to a voice stream whenever a message is transmitted for the voice stream in accordance with said first protocol, and not dropping a message of the voice stream in favor of a message of a first message type to be transmitted in accordance with said second protocol until at least  $m_1$  messages have been successfully transmitted consecutively for the voice stream, where  $m_1$  is greater than a first multiple of  $1/e$ , and  $e$  is an error percentage rate not to be exceeded.

29 (Original). The apparatuses of claim 28, wherein said message of the first message type to be transmitted in accordance with said second protocol is an acknowledgement message.

30 (Original). The apparatuses of claim 28, wherein said logic further not dropping a message of the voice stream in favor of a message of a second message type to be transmitted in accordance with said second protocol until at least  $m_2$  messages have been successfully transmitted consecutively for the voice stream, where  $m_2$  is greater than a second multiple of  $1/e$ , which is greater than  $m_1$ .

31 (Original). The apparatuses of claim 30, wherein said message of the second message type to be transmitted in accordance with said second protocol is a data message.

32 (Original). The apparatuses of claim 30, wherein said multi-protocol apparatus is further equipped with logic to reset a message transmitted counter corresponding to a voice stream when a message of the voice stream is dropped after at least  $m_1/m_2$  messages have been successfully transmitted consecutively for the voice stream.

33 (New). An apparatus comprising:

at least one wireless transceiver to transmit and receive signals in accordance with a first and a second protocol to and from first and second network devices of a first and a second wireless network communicatively coupled to the apparatus; and

at least one controller manager coupled to said at least one wireless transceiver to operate said at least one wireless transceiver to perform said transmits and receives in accordance with said first and second protocols in a coordinated manner, taking into consideration the relative priority of message types to be transmitted in accordance with the respective protocols.

34 (New). The apparatus of claim 33, wherein said at least one controller manager is equipped with logic to determine the message types of first messages to be transmitted to a selected one or selected ones of said first network devices in accordance with said first protocol, and to give priority to said first messages over second messages to be transmitted to a selected



one or selected ones of said second network devices in accordance with said second protocol, if message types of said first messages are determined of a multi-media type.

35 (New). In an apparatus having at least one wireless transceiver and at least one controller manager, a method of operation comprising:

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a first protocol to and from first network devices of a first wireless network; and

controlling said at least one wireless transceiver to transmit and receive signals in accordance with a second protocol to and from second network devices of a second wireless network;

wherein both of said controlling are performed in a coordinated manner, including taking into consideration the relative priority of message types to be transmitted in accordance with the respective protocols.

36 (New). The method of claim 13, said taking into consideration quality of service criteria to be achieved for the respective protocols comprises determining the message types of first messages to be transmitted to a selected one or selected ones of said first network devices in accordance with said first protocol, and giving priority to said first messages over second messages to be transmitted to a selected one or selected ones of said second network devices in accordance with said second protocol, if message types of said first messages are determined of a multi-media type.

37 (New). The apparatus of claim 1 wherein the quality of service criteria is further reflective of a second frequency of error for the second protocol.

38 (New). The method of claim 13 wherein the quality of service criteria is further reflective of a second frequency of error for the second protocol.

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